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TYPHOID FEVER.

Typhoid Fever.

BY P. DAUGHERTY, M.D., JUNCTION CITY, KAS.

Read before the Golden Belt Medical Society at Junction City, Kas., January 3, 1895.

Mr. President, and Gentlemen of the Golden Belt Medical Society: I have nothing new or startling to offer you upon the etiology, symptoms, or treatment of typhoid fever. Typhoid fever is a general disease, now supposed to be caused by infection of the system with a specific micro-organism, the bacillus typhosus, discovered by Koch and Eberth. It is a short, thick rod, with rounded ends, three times as long as broad. Unlike the bacillus of diphtheria it penetrates the tissues of the body and is found in the intestinal wall, mesenteric glands, liver, spleen, brain, kidneys, urine, sputa, rose spots upon the abdomen, and occasionally in the blood. It is now claimed by most authors that typhoid fever can be produced only by the above micro-organisms. This we will discuss later. The typhoid bacillus is tenacious of life. It is said to live for a brief period in a temperature of 194° F. But a moist heat of 140° F. will destroy it in twenty minutes. It is said to live in ice for many months, but if alternately frozen and thawed will be completely destroyed in three days. Chemical rays of solar light is said to soon kill it. It thrives best in the absence of sunlight. The principal source of infection is supposed to be drinking water. It is said not to live very long in drinking water, only from seven to fourteen days. Boiling the water destroys them at once. It is said to retain its vitality for quite long periods in dust, privy vaults, and soil. Milk is said to carry the germs of typhoid by being mixed with infected water. Vegetables sprinkled by impure water may become a source of danger. We are not supposed to become infected through the lungs. Now if all this be true, typhoid fever is a preventable disease, and one so easily prevented that no one should be afflicted with it. Boil your drinks and cook your food and you cannot have typhoid fever. We are not here to deny that the typhoid bacilli does not produce typhoid fever. We do not know whether it is the cause or the effect of diseased action. But admit it to be a cause, is it the only cause?

Are all the effects we meet with in typhoid fever the result of a single cause? A great philosopher tells us that no effect is the result of a single cause. From 1841 until 1866 I lived in southeastern Illinois. When we moved there it was a new and sparsely settled country, flat and poorly drained. Malarial diseases prevailed there from June until December, but typhoid fever was unknown until in the 50s. To-day malarial diseases are almost unknown there, and typhoid disease is very common. What has produced this change? Has it not been the change in malarial conditions? The country has been brought under cultivation and drained; vegetation no longer falls into the water to decompose and rot upon the ground where it grew. The country has become thickly settled, sanitary measures have been neglected, the soil has become polluted with the excrements of man and beast. The modern house, that shuts out fresh air and sunshine, has taken the place of the old log cabin with its wide fireplace and open walls, that admitted freely both sunshine and wind. Once they were poisoned by the ema-

nations from the swamps and stagnant pools with their decaying vegetable matter, and malarial diseases was one of the results. Now their systems are weakened and their resisting powers enfeebled by overcrowding, bad ventilation, pollution of the soil with their own excrements, and typhoid fever is one of the results. We are told that this accumulation of filth furnishes the soil for the typhoid bacillus to propagate in, and hence the disease. This may be true, but is it the whole truth? Typhoid fever may occur at any age, but usually spares the extremes of life. One-half of all the cases occur between the ages of 15 and 25 years. Whittaker says that liability begins to cease at 35 and is almost nil at 50.

Why is it that your bacillus is harmless at one period of life and deadly at another? All we can say is, that the predisposition to typhoid on the part of the individual does not exist at all times. Then it requires something more than typhoid bacilli to produce typhoid fever. You have got to have an individual predisposed to the disease. And right here the question arises: Can there not be sufficient potency in the predisposition to generate the disease *de novo?* If you say no, I shall then ask you how you know?

George B. Shattuck, of Boston, says that "Smallpox begets smallpox, and is begotten only by smallpox; and that typhoid fever begets typhoid fever and is begotten only by typhoid fever." But how does he know? All those infectious diseases had a beginning; there was a first case that was not begotten by any other case, but must have come from some other cause or causes. Shall we assume that those other causes have ceased to exist? Have we any evidence to that effect? We hold that all infectious diseases may originate *de novo*, under certain conditions of the system, and can then be transmitted to others in the usual way.

Symptoms.—Typhoid fever in this locality usually begins as an ordinary remittent fever. I have found it very difficult for me to determine for some days whether I had a case of typhoid or malarial fever. The disease is quite different here to what it was in Illinois when I met it there. Many of my cases begin with a chill, followed by fever reaching 104° F. in a few hours. Next morning I would find my patient free from fever. In the afternoon the fever would come up again, without the chill, but not reach so high a point as on the previous day. This remittent form of fever will sometimes last for several days, leading me to think that I have a case of malarial fever, and promise my patient to have him out in a few days. But quinine has no effect upon the fever, and after a few days it assumes a continued type, with tenderness in the right illiac region, dry tongue, scanty urine, increased area of splenic dullness, diarrhœa, or sometimes constipation, headache, wakefulness, and some bronchial catarrh, slight deafness and slowness in answering questions, and usually complete loss of appetite. I find the eruption in about one-half of the cases that I see. The abdomen is sometimes distended, at other times about normal in appearance, and in many of the cases that I have seen here they were concave. Delirium is usual during the second and third week of the fever, but in some cases the mind is clear throughout the attack. The man who looks for a typical case of typhoid fever as described in the text books will seldom find one. If you have no serious complications, defervescence commences the latter part of the third or sometime during the fourth week. You will find the morning temperature beginning to drop, while the evening temperature may continue about the same. The urine increases, the tongue becomes moist, the expression of the countenance becomes more cheerful. The morning temperature may drop to the normal, while the evening temperature will sometimes reach the highest point observed during the fastigium, beginning as an intermittent and ending as an intermittent.

You are all familiar with the many complications of typhoid fever, therefore I shall not speak of them.

Treatment.—If you can have a choice in rooms, select a large airy room with plenty of sunshine, if you can get it. Have two beds, one for your patient to occupy during

the day and the other at night. Have your beds thoroughly aired every day, giving them all the sunshine possible. Whenever any of the linen of bed or person becomes soiled with excreta have it immediately removed and placed in a 5 per cent. solution of carbolic acid, or boiled. The urine and feces should be voided in a 5 per cent. solution of carbolic acid, or 20 per cent. solution of hydrate of calcium. After each action on the bowels sponge the nates with a 5 per cent. solution of carbolic acid. Use the same in the spittoon that the patient uses. Don't have more than one watcher at night, and if your patient is in the habit of sleeping in a dark room when well, don't keep a light in his room at night. Put your patient to bed at once and keep him there. Use a bed pan instead of having him get up to the vessel. Should the fever run high, use cold water baths, sponge baths, or cold packs, according to circumstances. If you are unable to control the temperature in this way use some of the coal tar antipyretic preparations. Clean out the bowels with sulphate of magnesia every two or three days according to indications. Don't force too much food upon your patient. If he is in good flesh and is averse to taking food, let him draw on his storehouse of fat for a time. If he is anemic, with a weak heart, feed him moderately and give him stimulants in the form of eggnogg and milk punch. Whittaker says "the treatment of typhoid fever is wholly symptomatic. The hopes entertained regarding the jugulation, mitigation or abbreviation of the disease with specifics have proven groundless. The preparations of iodine, carbolic acid, calomel, hydronapthal, etc., have been recommended as anti-mycotic agents, but without evidence of real value."

When it is remembered that typhoid fever is a disease of long incubation, that the poison is received into the body at least two weeks before the manifestation of symptoms, by which time micro-organisms have penetrated into the recesses of tissues out of reach of remedies introduced into the intestinal canal, it may be understood why hopes of parasiticidal agents may not be entertained. This is almost the unanimous verdict of our best and most recent authors. The antitoxine mania is now upon us. Diphtheria is being treated by the hypodermic syringe, and the reports are as flattering as the tubercular treatment of tuberculosis was a few years ago, or as rejuvenation was with Brown-Sequard's testicular fountain of life. In less than a year typhoid fever will be tackled with the hypodermic syringe. I must acknowledge that I have accomplished but very little by medication in typhoid fever and have little faith in any specific for the disease.

But a voice comes from Youngstown, O., that will inspire many with new hope. Dr. John E. Woodbridge says he can cure typhoid fever in from seven to ten days. In a paper read before the Mahoning County Medical Society, February 12, 1894, he says: "Thus far in my practice I have had no death from typhoid fever for twelve years." He says he aborts all cases that come under his care on or before the eighth day of sickness. On March 12, 1894, the doctor read another paper on tyyhoid fever before the same same society, in which he says, "that in the future a death from typhoid fever will be prima facie evidence of culpable ignorance or criminal carelessness, either on the part of the patient, his friends, or his medical attendant."

Dr. J. H. Bennett, of Hazleton, Ohio, has confidence in Dr. Woodbridge. He says: "I called him in consultation October 27, last, to see the wife of a brother physician, who had been sick ten days with typhoid fever. The pulse was 120, her temperature 104½; rose spots abundant, marked tenderness in right iliac fossa, with enormous tympanitic distension. Her nervous symptoms were very bad; in fact, it was a typical and severe case of typhoid fever, with a feeble breath and a pulse which became dicrotic." And now comes the wonderful part of the story: "I heard Dr. Woodbridge say in answer to the husband's anxious inquiry, that he did not consider her in as much danger as he would a well person, taking the ordinary risks of out-door life." On the tenth day of treatment her tempera-

ture went to normal and never rose above normal after that day. I have failed to find his treatment in detail, except in his 51 and 55 reported cases. His prescriptions are numbered 1, 2 and 3. No. 1 is

Podophyllin	gr. j
Hydrarg. chlor. mit	ʒ j
Guaiacol carb	ʒ vj
Thymol	ʒ v
Menthol	ʒ j
Sacch. alb	ʒ ij

Eucalyptol (as much as possible).

M. In very minute doses every half hour to one hour.

Case 51 took about 15 grains of this mixture in two days. During the same time he took 60 minims of eucalyptol, 15 minims of guaiacol and 30 minims of turpentine. Prescription No. 2 is acitate of potash and sweet spirits of nitre. Prescription No. 3 is eucalyptol and guaiacol. He gave No. 1 for one day, then No. 3 for two days; then No. 1 for one day, and then No. 3 until temperature had been sub-normal for two days. Now, notwithstanding this treatment, I do not think that any undertaker need become discouraged and go out of business, for there will still be something for him to do. Dr. Woodbridge read a paper on typhoid fever in the section of practice of medicine at the June meeting of the American Medical Association, in which he says "that in 1882 I declared that hemorrhage of the bowels would be unknown if the disease were properly treated, saying I believed that a law sending to the state's prison a physician having such a result would be wise and beneficent. Should the Ohio Legislature pass a law that kind, what would be the result?" In this paper the doctor modifies his prescription slightly: No. 1, eucalyptol (as much as possible) is left out, and he alternates No. 1 with:

Eucalyptol	5 to 10 m
Guaiacol	2 to 5 m

In the confidence of youth we imagine that very much is under our control; in the disappointments of old age very little. Dr. Woodbridge must still be basking in the verdant dreams of youth. At least, he is still living in the age of faith and cherishing a hope, I fear, never to be realized by the medical profession outside of Ohio.

Angio Neurotic Œdema.

BY W. S. LINDSAY, M.D., TOPEKA, KAS.

Read before the Golden Belt Medical Society at Junction City, January 3, 1895.

Within the past few years certain manifestations of the function of vaso-motor nerve fibres have been observed and systematized to the extent of adding to our nomenclature of diseases the term used as the subject of my paper.

It has been fairly well proven that from the vicinity of the floor of the fourth ventricle of the brain, in the medulla, emanates an impulse, the greater part of which is transmitted along the lateral columns of the spinal cord, whence it is distributed over independent lines along the courses of the blood vessels, whose function it is to regulate the current of the circulation.

It has also been shown that along the courses of these nerve fibres certain depots or caches exist which serve as auxiliary centers.

Reasoning by analogy, we presume that within this intricate mechanism a definite center with its connecting fiber exists for every part of the vascular system.

There is reason to believe, also, that this impulse is carried to and fro over efferent and afferent fibres. We can thus see how disturbance of this important function may occur from either central or peripheral weakness or injury.

Clinically, angio neurotic œdema presents a local swelling of soft parts, which comes on suddenly without pain (although there are sensations of burning, stiffness, and slight itching) sometimes red and sometimes pale, which does not pit on pressure and is not an inflammation. The surface of this circumscribed part is smooth and gives no appearance of an eruption.

It has no definite location on the body, and sometimes more than one of these swellings will occur at the same time. The duration is from two or three hours to as many days.

The only deaths that have been known to occur from this disease were in cases where

the throat was the seat of the œdema, and it would seem that this might be largely prevented by intubation or tracheotomy. As in all nervous affections we learn that heredity is a prime factor in this disease, and like many others it follows along a line of degeneration.

In July of last year I was called to see a gentleman, whom I found as follows: Age about 50 years, fairly well nourished, subject to occasional attacks of neuralgia. A man whose business is exacting, and who follows it closely. I found the lips and right side of the face swollen to the extent that saliva flowed from the mouth and the eye was completely closed, the swelling extending to the hair line above the forehead. There was no pain, no heat or blistering of the surface like erysipelas, and no focus of tenderness to suggest abscess. The temperature was normal. The condition had developed suddenly, and so far as the patient knew without cause. I prescribed cascara sagrada internally, and an external application of liquid extract of witch hazel, diluted with four parts of water.

The following morning the swelling had entirely disappeared. There was slight feeling of stiffness of the tissue which remained as the only mark of the disorder for about ten days, when a second attack supervened.

This came and differed only from the first in the fact that the œdema appeared in the throat as well as in the face. There were no alarming symptoms, however, and draughts of hot water constituted the only change of treatment.

During August a third attack appeared, the patient saying that he had felt all the time that he was not quite rid of his tormentor, although there was no unnatural appearance of the face and he had attended to his work as usual. At this time I began the use of syr. hydriodic acid, teaspoonful doses three times a day, which was continued more than a week when a fourth attack similar to the first came on and disappeared as the others had done.

I now commenced the use of iron and, without wishing to advertise a proprietary remedy, I will say I used the tablets of hæmoferrum—iron supposed to be prepared from blood—I gave these two hours apart at first and later three times a day.

After a week my patient said he felt entirely relieved, and since then he has had no recurrence. He takes the iron at intervals, and is taking it at the present time.

I appreciate the fact that in this disease no remedy or line of treatment can be considered as permanently curative since the theory on which the pathology of the disease is based presumes that whenever from exhaustion of the cells of the vaso-moter centers the tonus of nerve impulse is diminished, a recurrence is likely to come. To me there are three points of interest in this case. First, the infrequency of so marked a case of presumably central origin. And this leads me to observe that the recognition of cases of this kind in recent years is probably one of the many evidences of over strain and consequent nervous exhaustion attendant upon our methods of civilization. The refined products of central nerve cells is used up faster than the usual vital forces can reproduce them.

Second—It is unusual to have any symptom of this disorder remain during the intervals between the seizures. This man was all the time conscious of an unnatural condition till he had time to get restoration of energy from the use of the iron.

Third—The remedy: There is nothing new in the idea of iron to increase the red blood corpuscles and thereby furnish pabulum for cells; but so far as I know it has not been persistently used in this disorder.

THE local treatment of diphtheria does not meet with universal approval. Some of our best physicians practice keeping the throat clean and supporting the patient, and claim better results than when they worried the patients in making applications to the throat.

REMEMBER that we will furnish you the JOURNAL for one year and Helbing's Modern Materia Medica for $2.50.

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Topeka, Kansas, Saturday, Feb. 16, 1895.

The State Board of Health.

The members of the present Board of Health owe their appointment to Governor Lewelling, and as they were appointed without regard to political prejudice, it was to be hoped that we would have a board independent of and unhampered by political influence. It seems, however, that the election of a secretary is to be more a matter of political preferment than of real scientific worth. The selection of a secretary is the most important matter the Board of Health has to settle, as upon him devolves the principal management of its affairs. His selection therefore should be left entirely to the judgment of the physicians appointed on the Board.

The Governor has recommended for this position a man who is little known to the profession, and who, from current reports, is legally unqualified to fill the office. From a medical standpoint, he may lack nothing in ability and may be perfectly capable of filling the office, but it is nothing but right and proper that the Board be left to judge of this matter unbiased by personal or political interest.

The Board of Health, unless it may be independent of every interest except the health of the State, might much better be abolished. We believe the members of the Board of Health to be able and conscientious, and perfectly capable of deciding who would be the best man for this place.

We hope the Governor will not insist upon his favorite, but should he do so and the board do not consider him competent we feel confident they will submit to no dictation which will compromise their dignity or their work.

Typhoid Fever in Infants.

It has been only recently that typhoid fever is recognized in children under two years of age. It was formerly believed that infants were immune and the disease was called remittent fever. Even after it had been clearly demonstrated that there occurred swollen Peyer's patches and mesenteric glands and spleen in children the existence of typhoid was still a matter of doubt. The probable reason for doubt was the lack of apparent cause and the failure to demonstrate a specific bacillus. It seems now that both of these objections have been met and that typhoid fever must be recognized as a disease of infancy. Dr. S. S. Adams, in a paper on this subject, describes the etiology, pathology and clinical history as follows:

Etiology.—A tangible cause has unquestionably been found for this disease, and the specific bacillus is found in the lesion. The poison does not originate spontaneously from decomposing animal or vegetable matter, but must have been transported from some infected individual. So far as infants

are concerned the proof of the presence of the bacillus is still negative. Eberth claims to have found the bacilli in the tissues of a fetus of the twentieth week's gestation, as well as in the intervillous spaces of the placenta, and developed cultures from them. The theory of the transformation of the germs outside of the body—that is, the transformation of the bacillus coli communis into the bacillus of Eberth—is still *sub judice*. Although this point has not been definitely determined, we must depend upon the experimental inoculation of animals for its settlement. Water is probably a good carrier of the disease in infancy, though milk, which readily takes up bacilli of other varieties, may be the common carrier.

Pathology.—The same anatomical lesions exist in the child and in the infant that are found in the adult. It will not be long before the presence of the bacilli will be demonstrated in the lymph structures of the bowel, spleen, and other organs. Gerhart believes that the lesions in children differ from those in the adult, especially in the beginning. The swelling of Peyer's patches shows itself earlier, and is seen with greater frequency near the ilio-cecal valve, though it may reach higher in the small intestine. The swollen patches often project above the mucous membrane, and above them are often seen denudation and slight ulceration. From these sites the destructive processes extend. It has been suggested that this difference in the amount of destruction may be due to the character of the food of the infant, which is fluid and non-irritating. In the case which I present below, the anatomical lesions in the intestines seem to be as typical as those in the adult.

Clinical History.—As far as the clinical picture is concerned, there does not seem to be any marked difference in the child and adult, but in the infant there is unquestionably a difference. Restlessness is marked and the fever persists for days with only slight irritation of the gastro-enteric tract. The temperature, which usually reaches a higher range than in the adult, is well borne and it is surprising how long some infants can bear a continuous high temperature. If headache is present it is not recognised. There is usually nothing characteristic in the appearance of the tongue. Vomiting has been observed in a few cases, but is probably due to forcing food. The appetite is uncertain, sometimes voracious, at others almost entirely absent. Constipation is usually present throughout the entire course of the disease, making it necessary to relieve the bowel by enemata. The typical rose spots are not always present or are seldom recognized. Tympany is rare. Hemorrhage from the bowel is seldom seen, though some observers mention it. Peritonitis may or may not be present. The spleen, if enlarged, is seldom detected, and Northrup claims that it cannot be recognized unless it project below the margin of the ribs. The liver is probably unaffected. The kidneys are not affected. Epistaxis is rare. Bronchitis has been observed in a few cases, but is probably due to hypostatic congestion. Relapses occur in a fair percentage of cases.

Ox-Gall in Tyyhoid Fever.

Dr. Henry Summa, in the *St. Louis Medical and Surgical Journal*, reports the results of the treatment of sixty cases of typhoid fever with ox-gall. In conclusion he makes the following tabulated statement:

1. Bile is a normal physiological antiseptic.
2. Bile is an antipyretic.
3. Bile is a tonic to the heart's action, decreasing the number of beats, but increasing the force of the individual beat; in other words, producing a rise in the blood pressure up to a certain extent.
4. It is, in my opinion, the best remedy in the treatment of typhoid fever.
5. Bile produces incroased contraction of the muscular structure of the intestine. Diarrhea, meteorism, hemorrhage, are no contra-indications to the use of ox-gall in the treatment of typhoid fever.
6. It is possible that the bile of other herbivorous animals (sheep, goat) is of the same composition as ox-gall, and therefore has the same effect.

The Medical Department of the State University.

To the Editor of the Capital.

In a recent issue of the *Capital* a "physician" presented the claims of the medical college for the University of Kansas to be located forty miles from Lawrence in the suburbs of Kansas City, Mo. The whole scheme is a good one for the big town at the mouth of the Kansas river in Missouri that absorbs the surplus of our State, but a very, very poor one for Kansas and her university. What are the facts in the case. Dr. S. B. Bell offered the regents of the State university six or seven acres of land out of his quarter section which lies one mile southwest of Kansas City, Mo., along the State line in Kansas and about 100 lots located on this same land. There is much broken and unimproved land between this property and the city and the surrounding country is rough and uninviting. This gift was simply a real estate scheme to aid in building up undesirable and almost unsalable real estate. Why the State university should contemplate for one moment the establishment at this point of a hospital or the medical department of the university located forty miles away is a matter of surprise to every man who has examined the facts. If it is the policy of the State of Kansas to build a medical department and hospital for Kansas City, Mo., this scheme is all right. The department would no doubt benefit the physicians of Kansas City, who would naturally control it, and be a help in caring for the charity patients of the odoriferous city over the line. Let Missouri build her own medical schools and hospitals and permit real estate owners, whether on the Kansas or Missouri side of the line, to find other methods of selling their real estate than using the prestige and support of the university to build up in an out of the way place the medical department of the State university. The idea of hunting for such an institution half way between Kansas City and Rosedale and finding it just over the Missouri line among the hills would be humorous if it was not so near a certainty. That the Kansas university contemplates for one moment the establishment of this medical department forty miles away and adjoining a large town like Kansas City is too preposterous to be patiently discussed. It would be very much to the advantage of Kansas institutions and especially the university to pay Dr. Bell $10,000 for the privilege of returning his gift. Every dollar put into this scheme by the university officials or regents will be absolutely thrown away. The people of Kansas will never sustain the absurd proposition, and the sooner some sound business sense is pounded into the gentlemen who are trying to force this medical department of the university on the Missouri line the better for our great institution at Lawrence.

PHYSICIAN NO. 2.

Physiology of Intestinal Peristalsis.

Dr. P. Grutzner (Deutsch Medical Wochnschrift; No. 48, pp. 897).

G. has demonstrated that although as a rule fluids introduced into the rectum are at once absorbed, in some cases, however, he observed that colored fluids introduced into the rectum of animals could be detected some hours later in other portions of the alimentary canal and especially in the stomach. This led him to a series of experiments, and employing small solid particles he found that they would be transported to the stomach after introduction into the rectum. He observed that if a small quantity of a mixture composed of equal parts of powdered animal charcoal and 0.6 per cent. salt solution were injected into the rectum of an animal, which had been allowed to fast for twenty-four hours before the introduction of the mixture, after the lapse of about four to six hours, the animal being killed, small quantities of the charcoal were present in various parts of the intestine, but particularly in the stomach. In carrying out a similar series of experiments upon the human subject, using starch and table salt for these

purposes, G. found that after some hours the starch could be detected present in the contents of the stomach.

The cause of this antiperistaltic movement G. ascribes to the chemical consistency of the fluid with which the particles are mixed, this upward movement invariably taking place when the substances were mixed with a weak solution of table salt, but never when suspended in plain water or other solutions. The table salt seems to act directly upon the mucous membrane of the rectum and occasions this "upward movement," or antiperistalsis. The upward movements take place in spite of the large masses of fæcal matter driven downward, but are confined, however, only to the peripheral portions of the intestinal lumen.

Strychnine in Pneumonia.

American Medical Compend.

Dr. Percy Kidd (*La Sperimentale*, No. 34, 1894) speaks highly of the use of strychnine hypodermically in the treatment of heart exhaustion in croupous pneumonia and other acute pulmonary states of inflammation. It seems to have a sedative and strengthening effect upon the nervous centers controlling the heart and respiration. It will frequently succeed where alcohol and ether fail. He advises its subcutaneous use in doses of one to one and a half milligrams. The condition of the pulse is the chief indication. As soon as it grows small and frequent or the respiratory movements become feeble it must be injected. The results are apparent in ten to fifteen minutes in an increase of the force of the pulse beat and the respiratory movements. Though in general one injection every twelve to twenty-four hours is sufficient, it may be administered more often, even every two hours for three or four times, to continue it at longer intervals, as the occasion requires. In alcoholic patients it also acts well, calming the delirium and giving the heart and respiration increased strength by its action upon the cardiac and respiratory centers.

Communication of Typhoid Fever.

Pacific Medical Journal.

At the last annual meeting of the British Medical Association, Dr. P. W. Williams, senior assistant physician, British Royal Infirmary, reported five cases of typhoid fever as tending to prove that this disease may be communicated by the breath or expectoration of infected persons. Three of the cases were brothers, and the fourth a nurse who had been nursing the first case. The first, fourth and fifth cases died, and in two of these the post mortem examination revealed all the typical lesions of typhoid fever, also ulceration of the larynx. As it is practically impossible for any case of enteric fever to be communicated by fæcal contamination in the British Royal Infirmary, by reason of the elaborate and careful precautions taken, and as the first case was delirious and was coughing and expectorating in all directions it is concluded that in this way the nurse in attendance contracted the disease. The fever in these cases was of peculiarly virulent type.

All three in the infirmary began with very severe headache and backache, profound nervous prostration supervened very early, and all three died apparently from respiratory failure. In two at least there were laryngeal ulcers, and probably also in the third, the nurse. In one there was purulent discharge from the ear, and in another an abscess formed in the arm. Cultures in agar from the spleen and larynx of the fifth case gave identical micro-organisms corresponding in every respect with the Eberth-Gaffky bacillus of enteric fever. These cases would seem to explain the possibility of typhoid fever being infectious, as maintained by Budd and indorsed by Collie; and emphasize the necessity for more careful prophylaxis in cases which exhibit laryngeal complications. The practical importance of bearing in mind the possibility of typhoid fever communication by the expectoration cannot be overestimated. The true nature of laryngeal ulcers in typhoid fever is still an open ques-

tion, authorities differing as to whether they are simple catarrhal ulcerations following the somewhat common complications of this disease, catarrhal pharyngitis and laryngitis—or specific ulcers analogous to the ulcers in the intestines. Osler states that he believes that the bacilli have not yet been found in the ulcers, and Fagge, Murchison, Roberts, Liebermeister, Strumpell and Bartholow are cited by Lincoln as of opinion that the ulcers are always secondary and are not specific lesions of the typhoid process. On the other hand, Klebs, Rokitansky, Landgraf, and Morell Mackenzie are among those who take the view that they are due to a specific deposit upon the laryngeal mucous membrane.

Sanitary Climatology.

U. S. DEPT. OF AGRICULTURE,
WEATHER BUREAU,
WASHINGTON, D. C., Jan. 2, 1895.

The interest manifested by every class of people in the subject of climate and its influence on health and disease has determined the Honorable the Secretary of Agriculture, through the medium of the Weather Bureau, to undertake the systematic investigation of the subject.

It is hoped to make the proposed investigation of interest and value to all, but especially to the medical and sanitary professions, and to the large number of persons who seek, by visitation of health resorts and change of climate, either to restore health or prolong lives incurably affected or to ward off threatened disease.

The study of the climates of the country in connection with the indigenous diseases should be of material service to every community, in showing to what degree local climatic peculiarities may favor or combat the development of the different diseases, and by suggesting, in many instances, supplementary sanitary precautions; also by indicating to what parts of the country invalids and health seekers may be sent to find climatic surroundings best adapted to the alleviation or cure of their particular cases.

The hearty co-operation of the various boards of health, public sanitary authorities, sanitary associations and societies, and of physicians who may feel an interest in the work, is asked to achieve and perfect the aims of this investigation.

No compensation can be offered for this co-operation other than to send, free of cost, the publications of the Bureau bearing upon climatology and its relation to health and disease to all those who assist in the work.

Co-operation will consist in sending to this office reports of vital statistics from the various localities. That these reports may be of value, it is evident to all that they should be accurate and complete, and be rendered promptly and regularly. Blank forms of reports have been prepared so as to occasion as little trouble and labor as possible on the part of the reporter, and will be furnished by the Bureau on application.

At the very beginning of the investigation it is not possible to outline precisely the channels through which the results obtained will be made public, but it is hoped to publish soon a periodical devoted to climatology and its relations to health and disease. The publication will probably resemble in size and general appearance the present *Monthly Weather Review*, the subject matter being, of course, different.

More detailed information will be furnished on application.

MARK W. HARRINGTON,
Chief of Bureau.

IT is the duty of the physician in every case of labor to examine the genital organs and anus of the child to see if they are normal. A little care at this time may save the physician chagrin later on when the fact may be detected by a competing brother and not be favorable to the accoucher.

CODEINE is highly recommended for cough in cases where morphine is generally used.

Typhoid Fever and the Oyster.

Maryland Medical Journal.

For several years past it has been suspected that typhoid fever might be a water-borne disease through the oyster, and since the sudden outbreak of the disease in Connecticut where a number of persons had contracted typhoid fever from oysters which had been put in foul water to ripen, it is becoming more and more fixed in the mind that the oyster eaten raw is not without danger.

Alas, poor bivalve! His career of usefulness seems to be threatened. The oyster is or should be well known to the inhabitant of Maryland and all eastern places which are not very far from salt water.

The oyster lives within the two valves of its shell, the deeply hollowed out one being below, in which it lies usually attached to some object and the shallow one acting as a cover. By the use of the powerful ligaments the shell may be opened and closed at will, and the sensitive fringe or border to the oyster gives it warning of an attack from crabs, or of cloudy and impure water, against which it closes the shell. It is quite possible that these oysters which are placed in fresh water to fatten die when the water is contaminated by sewage or foul matter and are eaten when dead.

More than fifteen years ago Sir Charles A. Cameron, the health officer of Dublin, Ireland, read a paper on the connection between typhoid fever and oysters, which was received with ridicule by the society. For the healthy life of an oyster, water which is clean and clear and which contains at least three per cent. of salt is necessary.

This new source of typhoid fever has assumed a dangerous aspect, and it happens at an unfortunate time, when large firms in this country had just begun to export oysters to England. The greatest care and the most diligent supervision should be exercised in cultivating and fattening the oyster, and here in Maryland, the home of the succulent bivalve, stringent laws should be enacted and enforced to protect an unsuspecting public against another unexpected rource of contagion.

A correspondent of the New York *Medical Record* has evidently been having some sport with the editor, who publishes in a recent issue of that excellent journal a letter signed "J. Early-Hustler" relating six cases of typhoid fever in a family from unsuccessful attempts made by each member in turn to swallow the same oyster, which was a very large one.

The *British Medical Journal* is publishing a special report on the possible conveyance of typhoid and other diseases by the oyster and other molluscs. The report will crystallize our knowledge on this subject, but watchfulness by the State oyster police and the intelligent supervision of oyster beds will remove many possible sources of danger.

The Abortive Treatment of Typhoid Fever.

New York Medical Journal.

Dr. J. E. Woodbridge, of Youngstown, Ohio, read a paper entitled "Typoid Fever Can Be Aborted; Another Year's Work With No Death and No Failure in Evidence." The author's previous publications on the subject, in the *Journal of the American Medical Association*, had caused this paper to be looked forward to with particular interest, chiefly, it appeared, because in one of those publicatlons he had gone so far as to assert substantially that any physician who failed to cure typhoid fever, provided he saw the patient in the early stages of the disease, was justly open to the charge of malpractice. This had aroused a general feeling of resentment, as was abundantly shown in the discussion. That portion of Dr. Woodbridge's paper which he read at first under the limitations of the rules of the meeting consisted almost wholly of clinical histories. The treatment on which he had particularly relied was by the internal administration of antiseptics.

In the discussion, in which many gentle-

men took part, notably Dr. I. N. Love, of St. Louis, the general opinion was expressed that there was no specific treatment that could be relied on to cut short the course of typhoid fever or that furnished any guarantee of its successful issue, also that a physician might encounter several epidemics without losing a patient, but finally meet with one that would prove so fatal as to wean him from any notion that he might have come to entertain that he had mastered the treatment of the disease.

Dr. Woodbridge had not proceeded far in closing the discussion when he was peremptorily asked if he would describe his treatment definitely. He answered "No," whereupon plain expressions of disapproval arose. After a little pause Dr. Woodbridge referred to his paper and read passages from which it appeared that he relied on two mixtures of menthol, guaiacol, and several other antiseptics. It was remarked by several members that there was nothing new in the treatment and the subject was dropped.

Diet in Bright's Disease.

Therapy.

Dr. John M. Batten, of Pittsburg, Pa. (*Jour. Am. Med. Ass'n*), enunciates certain physiological facts which have an important relation to the dietary of patients suffering from Bright's disease. Nitrogenous ingesta in great part undergo metamorphosis, and yield their nitrogen to be carried off in combination with other elements under the form of urinary products. A cat fed on flesh diet excretes on an average 6.8 parts of urea from every 100 parts of meat consumed, the great bulk of the nitrogen of the food taken passing out of the system in the form of urea. Lehmann states, from experiments made on himself, when he ate animal food wholly, that about five-sixths of the nitrogen taken was found in his urine in the form of urea. When he had breakfasted on animal food exclusively, his urine was so rich in urea as to throw down a copious precipitate of the nitrate on the addition of nitric acid. Experiments by Parkes and Mahomet are also referred to, showing that the quantity of urea excreted under a nitrogenous diet is greatly in excess of that excreted under a non-nitrogenous diet, and the work thrown on the kidneys is correspondingly increased. Reason would dictate that the kidney, weakened by disease, should be spared undue exertion. The food of the victim of Bright's disease should, therefore, be principally non-nitrogenous, or approximating it. Such food not only diminishes the amount of urea excreted by the kidneys, but also increases the quantity of urine. It thus favors the condition most favorable to the diseased organ, namely, rest to the kidney and increased flow of urine. The patient is further benefited by the ingestion of carbo-hydrates, for the reason that the cast-off material is excreted by the bowels and skin and otherwise. The bowels are kept more soluble, throwing off an amount of liquid that might not otherwise be excreted, and the carbo-hydrates also act as a diaphoretic, passing through the skin an additional amount of fluid.

After Effects of Antitoxine.

The College and Clinical Record.

Dr. Cnyrim (*Deutsche Med. Woch.*) gives a careful clinical history of two cases of an urticaria-like eruption, attended with fever, pain in the muscles and joints, and enlargement of the inguinal glands. Both the cases occurred in assistant physicians of the Hospital Zum Heiligen Geist at Frankfort.

In the first case, the antitoxine had been administered for a mild attack of diphtheria, in which the Klebs-Loffler bacilli were found. The temperature fell to normal in three days and the throat cleared up; but the patient in the next few days suffered from marked prostration. Five days after the temperature became normal, the eruption appeared (beginning at the site of the injection), the muscular and joint pains were severe, the temperature high, and two weeks elapsed before the patient was able to go home.

In the second case, the antitoxine was in-

jected as a matter of precaution, although bacteriological examination of the throat failed to show Klebs-Loffler bacilli, and the case was considered one of slight catarrhal angina. Two days after the injection, there was loss of appetite, sleeplessness, weakness, and malaise, soon followed by fever and general glandular swelling, and on the eighth day by an urticarial eruption. The patient was unable to go home for three weeks.

The coincidence in time and exact similarity between these two cases leads Dr. Cnyrim to conclude that they are without doubt after effects of the antitoxine. It is noteworthy that both these cases were rather serious, the temperature reaching 39.5° and 39.6° C, respectively, both patients affirming that they would much rather go through a mild attack of diphtheria than the disease from which they were suffering. Dr. Cnyrim also thinks that such an attack would be a most serious complication in a child already weakened by diphtheria. It will be remembered that in our last issue the occurrence of two cases in Berlin, similar to those just described, was noted. Although all four of the cases recovered, they were serious enough to show that diphtheria antitoxine may produce some unpleasant results. In the Frankfort cases the Behring antitoxine was employed, and the injections were made under most careful antiseptic precautions.

Bleeding at the Nose.

The College and Clinical Record.

Dr. Kohn (*Northwestern Lancet*, December 1, 1894, condensed from *Medical Record*) suggests the following as a scientific and rational plan of dealing with all cases of nosebleed: The patient is to sit quietly with the head thrown slightly back. All tight clothing about the neck or chest is to be loosened. Breathing through the nose is to be entirely suspended as well as all attempts at clearing the nose or throat. The patient then is told to breathe rapidly through the mouth; say thirty times a minute until he is tired, sounding a broad "A" with each expiration so as to shut off the posterior nares from the throat by bringing the soft palate against the posterior wall of the pharynx. These maneuvers place the nose at rest by stopping the passage of air through it, diminish the flow of blood to the head by the rapid respiration which determines the flow of blood to the lungs, and shut off the posterior nares. They are simple measures, and if not successful prepare the way for the next step of insufflation of tannin or astringents, followed if necessary by plugging the nostrils.

The Physiology of the Spleen.

Boston Medical and Surgical Journal.

Volpius (*Beitrage zur klin Chirurgie*) has arrived at the following general conclusions concerning the physiology of the spleen:

1. Historical study of the normal splenic tissue shows the possibility but not the certainty of the entrance of colorless cells in the circulation from the spleen. It is evident that the red cells undergo disintegration in the spleen, but there is no ground for assuming that they are formed in the spleen.

2. Comparison of the blood of the splenic artery and vein shows no positive difference.

3. In acute general anemia the spleen shows signs of increased activity.

4. Removal of the spleen causes a transient decrease in the number of red, and increase in the number of white blood cells.

□5. The thyroid gland has no vicarious relation to the spleen.

6. The lymph nodules and the bone marrow acquire an increased blood forming activity after extirpation of the spleen.

7. The regeneration of blood is retarded after hemorrhage in persons without spleen.

These conclusions, though contradicting certain accepted teaching, offer little that is new, but are of value in that they are based upon accurate scientific data, and corroborate much that has already been done. Un-

fortunately, our knowledge of the physiology of the spleen is still left in a state of confusion.

Anti-Toxic Action of the Liver.

Medical Times.

It has been established for some time, says the *London Lancet*, that the liver has a power of retaining certain poisonous alkaloids in high proportion and in their most active state, when injected into circulation. Dr. Schupfer, of the University of Rome, Italy, has now shown by experiments on frogs that, by intrinsic action, due to the specific activity of its cellules, the organ diminishes the toxic power of the alkaloids with which it is brought in contact, not only those introduced from without, but those elaborated within the body, as from disease. The importance of a normally working liver is thus more apparent than ever.

The Nature of Immunity.

Physician and Surgeon.

In a lecture delivered before the International Congress of Hygiene, Prof. Buchner of Munich, summarized his conclusions in regard to immunity and immunization. Natural and acquired immunity he considered differed in principle. The natural power of resistance is due to the bactericidal influence of the alexines, certain dissolved constituents of the organism and to a congenital power of resistance in the tissues and cells of the body. The leucocytes play an important part in this natural protection, not through phagocytosis, but by means of dissolved substances they secrete. The immunity artificially acquired or the immunity acquired in later life is due to the presence of modified bacterial products—the antitoxines. The action of the antitoxines is not directly upon bacterial products, but by modifying the organism these enable it to resist specific poisons. This is essentially the doctrine most prevalent.

Lysol in Typhoid Fever.

Medical Record.

Dr. Tison, of Paris, read a paper on lysol, which he regards as a perfect general, and especially intestinal, antiseptic. Its employment gives excellent results in eruptive fevers, but more particularly in typhoid fever. It is also a very useful remedy in diarrhea. It may be employed externally or internally according to the effect which it is desired to obtain, and however used its effects are admirable.

WHEN Dr. Wood wants a quick action from digitalis he uses m. x to xv of the fluid extract hypodermically. He says there is absolutely no difference in the therapeutic effect secured from the various preparations when given by the mouth, remembering that the tincture is ten times the strength of the infusion. The alkaloid of digitalis should never be used, as the true active principal has never been separated. Take two samples from different manufacturers—one will be soluble and the other insoluble in water. The dose of the drug is so small that the use of the alkaloid promises no advantage. Therefore always use the crude drug or its direct preparations, and watch your apothecary closely, for much digitalis is bad, and when you want digitalis you want digitalis.

PHIL. F. WEIGEL, M.D,, of Denver, Colo., under date of November 24, 1894, writes that he has given antikamnia and codeine tablets a thorough trial and is fully satisfied that it is a most successful combination. He mentions particularly a patient who was relieved of a very troublesome affection of the larynx caused by a severe attack of influenza.

CASTRATION for hypertrophy of the prostate is gradually proving its worth.